WHAT IS CLAIMED IS:

1. A system for monitoring movement of a person's eye, comprising:

a device configured to be worn on a person's head;

an array of emitters on the device for directing light towards an eye of the person when the device is worn, the array of emitters configured for projecting a reference frame towards the eye; and

a camera oriented towards the eye for monitoring movement of the eye relative to the reference frame.

2. The system of claim 1, further comprising one or more sensors on the device for detecting light from the array of emitters, the one or more sensors producing an output signal indicating when the eye is open or closed;

3. The system of claim 2, wherein the one or more sensors comprise an array of sensors in a predetermined relationship with the array of emitters for detecting light from the array of emitters that is reflected off of respective portions of the eye or its eyelid, each sensor producing an output signal indicating when the respective portion of the eye is covered or not covered by the eyelid.

4. The system of claim 2, wherein the array of emitters and the one or more sensors are disposed separately and substantially laterally from one another.

5. The system of claim 2, wherein the array of emitters and the one or more sensors comprise solid state devices capable of operating both as an emitter and as a sensor.

6. The system of claim 2, wherein the camera is configured for producing a video signal, and wherein the system further comprises a processor for correlating the output signal from the one or more sensors with the video signal from the camera for determining the person's level of drowsiness.

7. The system of claim 6, further comprising a warning indicator on the device, the warning indicator being activated when the processor determines a predetermined level of drowsiness has occurred.

8. The system of claim 1, wherein the array of emitters comprises a plurality of emitters disposed in a substantially vertical arrangement on the device.

9. The system of claim 8, wherein the array of emitters further comprises a plurality of emitters disposed in a substantially horizontal arrangement on the device.

10. The system of claim 1, wherein the array of emitters is configured for projecting a set of crossed bands towards the eye for dividing a region including the eye into four quadrants.

11. The system of claim 1, further comprising a transmitter on the device for wireless transmission of video output signals from the camera to a remote location.

12. The system of claim 1, wherein the array of emitters comprise infrared emitters configured to emit pulses of infrared light.

13. The system of claim 12, wherein the camera comprises an infrared camera.

14. The system of claim 1, wherein the camera is mounted on the device.

15. The system of claim 14, wherein the camera comprises a fiberoptic assembly.

16. The system of claim 14, wherein the camera comprises at least one of a CCD and CMOS detector.

17. The system of claim 1, further comprising a sensor on the device for detecting one or more physiological characteristics of the person.

18. The system of claim 17, wherein the sensor comprises at least one of an EEG electrode, an EKG electrode, an oximetry sensor, a pulse sensor, an airflow sensor, and a temperature sensor.

19. The system of claim 1, further comprising at least one of an orientation sensor for detecting the spatial orientation of the device and an actigraphic sensor.

20. The system of claim 1, wherein the device comprises at least one of an eyeglass frame, a hat, a helmet, a visor, and a mask.

21. A system for monitoring movement of a person's eye, comprising:

a frame configured to be worn on a person's head;

an array of emitters on the frame for directing light towards an eye of the person when the frame is worn, the array emitters configured to project a reference frame towards the eye;

an array of sensors on the frame in a predetermined relationship with the array of emitters for detecting light from the array of emitters that is reflected off of respective portions of the eye or its eyelid, each sensor producing an output signal indicating when the respective portion of the eye is covered or not covered by the eyelid;

a camera on the frame for monitoring movement of the eye relative to the reference frame, the camera configured for producing a video signal of a region of the eye and the reference frame; and

a transmitter coupled to the sensor for wireless transmission of the output signal and the video signal to a remote location.

22. The system of claim 21, further comprising a processor for correlating the output signal and the video signal to determine the person's level of drowsiness.

23. The system of claim 22, further comprising a display for providing a graphical output of the output signal simultaneous with the video signal.

24. A method for monitoring movement of a person's eye using a detection device including an array of emitters that are directed towards an eye of the person when the detection device is worn, and a camera oriented towards the eye, the method comprising:

emitting light from the array of emitters towards the eye to project a reference frame onto the eye;

monitoring movement of the eye relative to the reference frame with the camera; and

generating a graphical output of the movement monitored by the camera relative to the reference frame.

25. The method of claim 24, wherein the detection device further comprises one or more sensors, and wherein the method further comprises detecting light from the array of emitters reflected off of the eye with the one or more sensors, the one or more sensors producing a light intensity signal indicating when the eye is open or closed.

26. The method of claim 25, wherein the array of sensors is disposed in a predetermined relationship with the array of emitters for detecting light from the array of emitters that is reflected off of respective portions of the eye or its eyelid, each sensor producing an output signal indicating when the respective portion of the eye is covered or not covered by the eyelid.

27. The method of claim 24, wherein the monitoring step comprises measuring movement of the eye's pupil relative to the reference frame.

28. The method of claim 27, further comprising graphically displaying the movement of the eye's pupil relative to the reference frame.

29. The method of claim 24, further comprising correlating the output signal from the one or more sensors with video signals produced by the camera monitoring movement of the eye relative to the reference frame, thereby determining the person's level of alertness.

30. The method of claim 29, further comprising providing a warning to the person when the determined level of alertness falls below a predetermined level.